

APR 04 2007

Application No. 10/767675
Page 3

Amendment
Attorney Docket No. S63.2B-10813-US01

Amendments To The Claims:

1. (Currently amended) A catheter comprising:
a catheter shaft having a proximal end and a distal end;
an inflation balloon having a proximal waist portion, a proximal cone portion, a main body portion, a distal cone portion and a distal waist portion; and
a catheter tip having a proximal end, a distal end, a main shaft portion and a distal shaft portion, said catheter tip comprising a recessed portion, said catheter tip proximal end being coupled to said catheter shaft distal end, said balloon distal waist portion being attached to said catheter tip distal shaft portion; and said catheter tip main shaft portion being substantially coextensive with said balloon, the recessed portion oriented beneath the balloon distal cone portion.
2. (Currently amended) The catheter of claim 1, further comprising at least one marker oriented beneath the balloon main body portion.
3. (Original) The catheter of claim 2, wherein said marker is a radiopaque marker.
4. (Original) The catheter of claim 2, wherein said marker is an MRI marker.
5. (Original) The catheter of claim 1, wherein said catheter tip distal end comprises a radiused tip.
6. (Currently amended) The catheter of claim 1, wherein said catheter tip further comprises a second recessed portion, the second recessed portion oriented beneath the balloon proximal cone portion.
7. (Currently amended) The catheter of claim 1, wherein said catheter tip further comprises a hub portion oriented beneath the balloon main body portion.
8. (Original) The catheter of claim 7, wherein said catheter tip comprises a molded catheter tip and said hub portion is formed integrally with the catheter tip.
9. (Original) The catheter of claim 8, further comprising at least one marker.
10. (Original) The catheter of claim 9, wherein said radiopaque marker is insert molded.
11. (Original) The catheter of claim 10, wherein an outer surface of said radiopaque marker is flush with an outer surface of said catheter tip.
12. (Original) The catheter of claim 1, further comprising a stiffener.
13. (Original) The catheter of claim 12, wherein the stiffener is a spring.

APR 04 2007

Application No. 10/767675

Page 4

Amendment

Attorney Docket No. S63.2B-10813-US01

14. (Original) The catheter of claim 1, wherein said catheter tip further comprises a marker region.
15. (Original) The catheter of claim 1, wherein said catheter tip further comprises a first region and a second region, said first region having greater flexibility than said second region.
16. (Currently amended) A catheter comprising:
a catheter shaft having a proximal end and a distal end;
an inflation balloon having a proximal waist portion and a distal waist portion; and
a catheter tip having a proximal end, a distal end, a main shaft portion and a distal shaft portion; said catheter tip comprising a first region and a second region, said first region having greater flexibility than said second region; said catheter tip proximal end being coupled to said catheter shaft distal end, said balloon distal waist portion being attached to said catheter tip distal shaft portion; said catheter tip main shaft portion being substantially coextensive with said balloon;
- ~~The catheter of claim 15, wherein said second region comprises entrained stiffening fibers selected from a group consisting of carbon fibers, polypropylene fibers and polyolefin fibers.~~
17. (Original) The catheter of claim 1, further comprising:
an outer catheter shaft;
wherein said balloon proximal waist portion is coupled to said outer catheter shaft.
18. (Original) The catheter of claim 1, wherein said catheter tip is coupled to said catheter shaft by heat bonding.
19. (Original) The catheter of claim 1, wherein said catheter tip is coupled to said catheter shaft by radio-frequency welding.
20. (Original) The catheter of claim 1, wherein said catheter tip is coupled to said catheter shaft with an adhesive.
21. (Original) The catheter of claim 1, wherein the catheter is a stent delivery catheter.
22. (Original) The catheter of claim 21, further comprising a stent mounted about the balloon.
23. (Original) The catheter of claim 22, wherein the stent is an inflation expandable stent.
24. (Original) The catheter of claim 22, wherein the stent is a self-expanding stent.
25. (Currently amended) A catheter comprising:
a catheter shaft having a proximal end and a distal end;

Application No. 10/767675
Page 5

Amendment
Attorney Docket No. S63.2B-10813-US01

an inflation balloon having a proximal waist portion and a distal waist portion; and
a catheter tip having a proximal end, a distal end, a main shaft portion and a distal shaft
portion; said catheter tip proximal end being coupled to said catheter shaft distal end; said
balloon distal waist portion being attached to said catheter tip distal shaft portion; said catheter
tip main shaft portion being substantially coextensive with said balloon;

~~The catheter of claim 1,~~ wherein said catheter tip includes a shaped portion oriented
beneath said balloon, the cross-section of the shaped portion having a plurality of sides.

26. (Original) The catheter of claim 25, wherein the shaped portion is triangular.

27-57. (Cancelled)